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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,269	03/12/2004	Atsushi Watanabe	0392.1881	5867

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EXAMINER	
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ART UNIT	PAPER NUMBER
3664	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,269	WATANABE ET AL.	
	Examiner	Art Unit	
	NICHOLAS KISWANTO	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6 and 8-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (5,980,082).

As to claims 6, 17, and 18, Watanabe/082 shows a teaching position correcting apparatus for correcting a teaching point position of a robot operation program (abstract), comprising work tool moving/stopping means for allowing an work tool mounted on an arm tip end of said robot to move toward a teaching point of said robot operation program on a path which intersects the teaching point (Fig. 1, L12) and to automatically stop said work tool before it reaches the teaching point (col 4, line 30-58: *In this case, "a teaching point" is "Pa" first referenced in line 36. While this passage describes the work tool reaching teaching point Pt, said work tool does not reach teaching point Pa, which itself is a teaching point*), jog feed means for moving said robot by jog feeding from a position where said work tool is stopped by said work tool moving/stopping means (col 4, line 58-62), positional relation presenting means for presenting, to an operator, a positional relation between said work tool and an operation target

36a, and teaching position correction instruction means commanding to correct a teaching position (col 4, line 65-67).

As to claim 8, Watanabe/082 further shows a jog feed means that allows the robot to move along a jog feed coordinate system based on an attitude of said work tool (col 4, line 7-25).

As to claim 9, Watanabe/082 further shows a work tool of said robot that includes a movable portion which is driven by a servo mechanism, and said movable portion has a mechanism which comes into contact with the operation target (col 3, line 13; col 3, line 32-37).

As to claim 10, Watanabe/082 further shows a teaching position correcting apparatus that has a work tool that is a spot welding gun (col 3, line 52-56).

As to claim 11, Watanabe/082 further shows a work tool that is a servo hand which grasps an article by a servo mechanism (Fig. 5; col 3, line 32-37).

As to claim 12, Watanabe/082 shows a teaching position correcting apparatus further comprising means for extracting a teaching point to be taught and corrected from a program (col 3, line 38-40).

As to claim 13, Watanabe/082 shows a teaching position correcting apparatus comprising means for designating a teaching point to be taught and corrected from a program 40.

As to claim 14, Watanabe/082 shows a teaching position correcting apparatus comprising means for automatically correcting a next and subsequent teaching point positions based on a position correcting amount of one or more teaching points whose teaching position was corrected (col 4, line 65-67).

As to claim 15, Watanabe/082 shows a teaching position correcting apparatus for correcting a teaching point position of a robot operation program (abstract), comprising work tool moving/stopping means for allowing an work tool mounted on an arm tip end of said robot to move toward a teaching point of said robot operation program on a path which intersects the teaching point (Fig. 1, L12) and to automatically stop said work tool before it reaches the teaching point (col 4, line 30-58: *In this case, "a teaching point" is "Pa" first referenced in line 36. While this passage describes the work tool reaching teaching point Pt, said work tool does not reach teaching point Pa, which itself is a teaching point*), jog feed means for moving said robot by jog feeding from a position where said work tool is stopped by said work tool moving/stopping means (col 4, line 58-62), positional relation presenting means for presenting, to an operator, teaching position

correction instruction means commanding to correct a teaching position (col 4, line 65-67), and teaching position correcting apparatus comprising means for automatically correcting a next and subsequent teaching point positions based on a position correcting amount of one or more teaching points whose teaching position was corrected (col 4, line 65-67: *It is unclear from claim exactly which teaching point is referred to as "corrected teaching point" as both Pa and Pt can be considered "corrected"*).

As to claim 16, Watanabe/082 further shows calculating an attitude variation amount of the robot work tool at a current teaching point and a next teaching point (col 5, line 16 - 21), and means for judging whether a next and subsequent teaching point positions should be automatically corrected based on the attitude variation amount (col 5, line 21 - 30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe/082, further in view of Watanabe et al. (6,763,284).

As to claim 7, Watanabe/082 shows all elements per claimed invention as described in paragraph regarding claim 6 above. Watanabe/082 shows a teaching position correcting apparatus according to claim 6, wherein said positional relation presenting means includes a work tool tip end which can be attached to and detached from said work tool (col 3, line 11-12; col 3, line 50-56).

However, Watanabe/082 does not show a camera means for capturing the operation target in view, and image display means for presenting an image of said camera means to an operator.

Watanabe/284 shows a camera means (col 3, line 30 - 35) for capturing the operation target in view, and image display means for presenting an image of said camera means to an operator (col 5, line 17 - 27). Watanabe/284 teaches that using these means, it becomes unnecessary to perform a playback motion on an object robot to be taught. Further, it is not required to constitute a model for an off-line teaching, so that a teaching work for a robot can easily be performed (col 3, line 4 - 7).

It would have been obvious to one of ordinary skill in the art to modify the invention of Watanabe/082 by adding shows a camera means for capturing the operation target in view, and image display means for presenting an image of said camera means to an operator in order to make it unnecessary to perform a playback motion on an object robot to be taught, and to further make it not

required to constitute a model for an off-line teaching, so that a teaching work for a robot can easily be performed, as taught by Watanabe/284 (col 3, line 4 - 7).

Response to Arguments

Applicant's arguments with respect to claims 6 to 18 have been considered but are moot in view of the new ground(s) of rejection. Claim amendments have been addressed above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Watanabe et al. (2002/0072826) shows a robot arm with a welding tool that can display information to a human operator.

Hirayama et al. (7,136,723) shows a robot arm teaching method where the robot arm moves automatically to a working point and is corrected by a human operator in case of any inaccuracy in position.

Lemelson, et al. (6,898,484) shows a robot teaching method that uses radio signals to reposition a robot arm to the correct teaching point.

De Smet (6,434,449) shows a robot arm that has a variable resolution position sensing device.

Muller (61236,906) shows a robot arm that automatically moves to a

working point.

Elfving et al. (6,226,565) shows a robot arm with a servo motor at its end.

Kishi et al. (4,700,118) shows a robot arm that implements Cartesian coordinates.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS KISWANTO whose telephone number is (571)270-3269. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571)272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas Kiswanto/
July 8, 2009
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664